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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XF319

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Coast Boulevard Improvements Project, La Jolla, California

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Proposed incidental harassment authorization (IHA); request for comments.

SUMMARY: NMFS has received a request from the City of San Diego for authorization to take marine mammals incidental to Coast Boulevard improvements in La Jolla, California. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an IHA to incidentally take marine mammals during the specified activities.

DATES: Comments and information must be received no later than *[insert date 30 days after date of publication in the FEDERAL REGISTER]*.

ADDRESSES: Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service.

Physical comments should be sent to 1315 East-West Highway, Silver Spring, MD 20910 and electronic comments should be sent to *ITP.Carduner@noaa.gov*.

Instructions: NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period. Comments received electronically, including all attachments, must not exceed a 25-megabyte file size. Attachments to electronic comments will be accepted in Microsoft Word or Excel or Adobe PDF file formats

only. All comments received are a part of the public record and will generally be posted online at www.nmfs.noaa.gov/pr/permits/incidental/construction.htm without change. All personal identifying information (*e.g.*, name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

FOR FURTHER INFORMATION CONTACT: Jordan Carduner, Office of Protected Resources, NMFS, (301) 427-8401. Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online at: www.nmfs.noaa.gov/pr/permits/incidental/construction.htm. In case of problems accessing these documents, please call the contact listed above.

SUPPLEMENTARY INFORMATION:

Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

An authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth.

NMFS has defined “negligible impact” in 50 CFR 216.103 as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.

The MMPA states that the term “take” means to harass, hunt, capture, kill or attempt to harass, hunt, capture, or kill any marine mammal.

Except with respect to certain activities not pertinent here, the MMPA defines “harassment” as: any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. §§ 4321 *et seq.*) and NOAA Administrative Order (NAO) 216-6A, NMFS must review our proposed action with respect to environmental consequences on the human environment.

Accordingly, NMFS has preliminarily determined that the issuance of the proposed IHA qualifies to be categorically excluded from further NEPA review. This action is consistent with categories of activities identified in CE B4 of the Companion Manual for NOAA Administrative Order 216-6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion.

We will review all comments submitted in response to this notice prior to concluding our NEPA process in making a final decision on the IHA request.

Summary of Request

NMFS received a request from the City of San Diego (City) for an IHA to take marine mammals incidental to Coast Boulevard improvements in La Jolla, California. The City's request was for harassment only and NMFS concurs that mortality is not expected to result from this activity. Therefore, an IHA is appropriate.

The City's application for incidental take authorization was received on December 16, 2016. On March 1, 2017, we deemed the City's application for authorization to be adequate and complete. The planned activity is not expected to exceed one year, hence we do not expect subsequent MMPA incidental harassment authorizations would be issued for this particular activity.

The planned activities include improvements to an existing public parking lot, sidewalk, and landscaping areas located on the bluff tops above Children's Pool, a public beach located in La Jolla, California. Species that are expected to be taken by the planned activity include harbor seal, California sea lion, and northern elephant seal. Take by Level B harassment only is expected; no injury or mortality of marine mammals is expected to result from the proposed activity. This would be the first IHA issued for this activity, if issued. The City applied for, and was granted, IHAs in 2013 2014 and 2015 (NMFS 2013; 2014; 2015) for a lifeguard station demolition and construction project at Children's Pool beach. NMFS published notices in the **Federal Register** announcing the issuance of these IHAs on July 8, 2013 (78 FR 40705), June 6, 2014 (79 FR 32699), and July 13, 2015 (80 FR 39999), respectively. The City also applied for, and was granted, an IHA in 2016 (NMFS 2016) for a sand sampling project at Children's Pool beach. NMFS published a notice in the **Federal Register** announcing the issuance of the IHA on June 3, 2016 (81FR 35739).

Description of Proposed Activity

Overview

The City of San Diego plans to conduct improvements to an existing public parking lot, sidewalk, and landscaping areas located on the bluff tops above Children's Pool to upgrade public access and safety. Demolition activities would include the removal of existing parking lot paving; concrete curb, gutter, and sidewalk; and the removal of existing irrigation and plant materials. Construction activities would include subgrade preparation, asphalt paving, and marking of parking stalls; pouring of concrete curb, gutter, and sidewalk; construction of rock walls, installation of fencing, placement of landscape boulders, installation of landscaping and irrigation; and finishing and clean up. The City has requested an IHA for incidental take, via Level B harassment only, of harbor seals that routinely haul out on the beach below the project, as well as California sea lions and northern elephant seals that occasionally haul out on the beach.

The City has determined that noise from demolition and construction associated with the planned project has the potential to result in behavioral harassment of pinnipeds on Children's Pool. No injury or mortality of marine mammals is expected as a result of the planned activities. The expectation that behavioral harassment of pinnipeds would result from the planned activities is based on monitoring reports from the recent demolition and construction of the Children's Pool lifeguard station project, for which the City was issued Incidental Harassment Authorizations in 2013, 2014 and 2015 (Hanan & Associates 2016).

Dates and Duration

The planned project would occur from June 1, 2017 through December 14, 2017. Activities would occur Monday through Saturday only, and no work would be planned on all applicable California and Federal holidays. There would be a total of 164 available days during which project activities could occur. No construction would occur during the Seal Popping Season Moratorium (December 15 to May 15) and for an additional two weeks to accommodate lactation and weaning of late season pups. Thus construction would not occur from December 15th to May 29th. The IHA, if issued, would be valid from June 1, 2017 through December 14, 2017.

Specified Geographic Region

The location of the project would be La Jolla, California. All planned project related activities would occur atop the 20 to 40-foot bluffs above Children's Pool beach, adjacent to the Children's Pool Lifeguard Station located at 827 ½ Coast Boulevard, La Jolla, California (See Figure 1 of the City's IHA application).

Detailed Description of Specific Activities

Children's Pool beach was created in 1932 by building a breakwater wall that allowed for a protected pool for swimming. Since then, the pool has partially filled with sand and the beach has widened to approximately 50 meter (m) (164 feet (ft)) at low tide. The planned project would include improvements to an existing public parking lot, sidewalk, and landscaping areas located on top of a coastal bluff above Children's Pool beach. Components of the project include the demolition and construction of an asphalt parking lot; concrete curb, gutter, and sidewalk; placement of landscape boulders; and the delivery and hauling away of materials. These components of the project would require the use of a variety of heavy equipment, machinery, and trucks, such as concrete breaker, jackhammer, backhoe, bobcat, dump trucks, cement/pump

truck, paver, and roller. See Table 1 for a description of the various project components and potential associated sound source levels (see “Potential Effects of Specified Activities on Marine Mammals and their Habitat” later in this document for a discussion of potential effects of acoustic sources on marine mammals).

Table 1: Activities Planned During the Proposed Project and Estimated Duration and Maximum Sound Levels.

Task	Related Activities	Equipment Required	Maximum sound level from activities, estimated at 1m (dB re 20 µPa) ¹	Estimated Dates and Duration (weeks)
Mobilization & temporary facilities	Install: temporary perimeter fencing, temporary utilities, temporary office trailer (if needed), temporary sanitary facilities	truck, backhoe, trailer, small auger, hand/power tools	100	June 1-June 30 (4 weeks)
Demolition & site clearing	Remove hardscape (planters, curb and sidewalk) and landscaping, debris to be hauled via Coast Boulevard	excavator, hydraulic ram, jackhammer, trucks, hand/power tools	110	July 3- July 14 (2 weeks)
Site preparation & utilities	Rough grade site, modify underground utilities if necessary	loader, backhoe, truck	110	July 17-August 11 (4 weeks)
Site improvements	Construct concrete walls, curbs, and planters, fine grade, irrigation, hardscape, landscape, hand rail	backhoe, truck, hand/power tools, concrete pump/truck, fork lift	110	August 14-November 3 (12 weeks)
Final inspection, demobilization	Remove construction equipment, inspection, make corrections	truck, hand/power tools	100	November 6 – December 1 (4 weeks)

¹ Tierra Data 2016

The equipment planned for use during the proposed project is very similar to that used during the demolition and construction of the Children’s Pool lifeguard station project. Based on monitoring reports associated with IHAs issued for the demolition and construction of the Children’s Pool lifeguard station project, equipment used for that project caused sound levels that resulted harassment (Level B) of pinnipeds at Children’s Pool beach. The highest sound levels estimated during construction of the Children’s Pool lifeguard station were 100 to 110 decibels (dB) root mean squared (rms). Results of acoustic monitoring during the lifeguard station project showed peak values of 91 to 103 dB rms within 15 to 20 m (49 to 66 ft) of construction activities (Hanan & Associates 2016).

Children's Pool is designated as a shared-use beach. The beach and surrounding waters are used for swimming, surfing, kayaking, diving, tide pooling, and nature watching. Harbor seals, in particular, draw many visitors. During the harbor seal pupping season (December 15 through May 15), the beach is closed to the public. Outside of the pupping season, beach access and recreational uses are permitted by the City, provided that there is no direct harassment of harbor seals. A guideline rope strung along the upper part of the beach, as well as signage, encourage the public to respect the seals in the area and view them at a safe distance. Studies indicate that harbor seals are habituated to human presence at Children's Pool (Tierra Data 2015); however, habituation or reaction to human activity depends on the individual seal and the circumstances.

Proposed mitigation, monitoring, and reporting measures are described in detail later in this document (please see "Proposed Mitigation" and "Proposed Monitoring and Reporting").

Description of Marine Mammals in the Area of Specified Activities

Three species are considered to co-occur with the City's planned activities: harbor seals (*Phoca vitulina*), which are by far the dominant observed marine mammal in the project area, as well as California sea lions (*Zalophus californianus*) and northern elephant seals (*Mirounga angustirostris*) which also occasionally haul out in the project area, in far lower numbers. This section provides summary information regarding local occurrence of these species. We have reviewed the City's detailed species descriptions, including life history information, for accuracy and completeness and refer the reader to Sections 3 and 4 of the City's IHA application, as well as to NMFS's Stock Assessment Reports (SAR; www.nmfs.noaa.gov/pr/sars/), instead of reprinting all of the information here. Additional general information about these species (*e.g.*,

physical and behavioral descriptions) may be found on NMFS's web site (www.nmfs.noaa.gov/pr/species/mammals/).

Northern fur seals (*Callorhinus ursinus*) and Guadalupe fur seals (*Arctocephalus townsendi*) have been observed at beaches near the project location on rare occasions, and a northern fur seal was recently observed hauled out at La Jolla Cove, less than a mile from Children's Pool beach (pers comm D. Hanan, Hanan & Associates, to D. Youngkin, NMFS, Feb 4, 2016). Beginning in January 2015, elevated strandings of Guadalupe fur seal pups and juveniles were observed in California. The Working Group on Marine Mammal Unusual Mortality Events determined that the ongoing stranding event meets the criteria for an Unusual Mortality event (UME) and declared strandings of Guadalupe fur seals from 2015 through 2017 to be one continuous UME. The causes and mechanisms of this UME remain under investigation. Fur seals do not generally haul out in urban mainland beaches such as Children's Pool, and their presence would likely be attributed to sickness or injury if they were observed in the project location. Therefore, their occurrence at Children's Pool would be considered extralimital and would not be expected. Thus these species are not considered further in this proposed IHA. The planned activities would not be conducted if marine mammal species other than those proposed for authorization in this document were present on Children's Pool.

Table 2 lists all species with expected potential for occurrence in the project location and summarizes information related to the population or stock, including PBR, where known. For taxonomy, we follow Committee on Taxonomy (2016). For status of species, we provide information regarding U.S. regulatory status under the MMPA and ESA. Abundance estimates presented here represent the total number of individuals that make up a given stock or the total number estimated within a particular study area. NMFS's stock abundance estimates for most

species represent the total estimate of individuals within the geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. PBR, defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population, is considered in concert with known sources of ongoing anthropogenic mortality to assess the population-level effects of the anticipated mortality from a specific project (as described in NMFS's SARs). While no mortality is anticipated or authorized here, PBR and annual serious injury and mortality are included here as gross indicators of the status of the species and other threats.

All values presented in Table 2 are the most recent available at the time of publication and are available in NMFS's SARs (*e.g.*, Carretta *et al.*, 2016). Please see the SARs, available at www.nmfs.noaa.gov/pr/sars, for more detailed accounts of these stocks' status and abundance.

Table 2: Marine Mammal Species Potentially Present in the Project Area.

Species	Stock	ESA/MMPA status; Strategic (Y/N) ¹	Stock abundance (CV, N _{min} , most recent abundance survey) ²	PBR ³	Annual M/SI ⁴	Relative occurrence in project area; season of occurrence
Order Carnivora – Superfamily Pinnipedia						
Family Otariidae (eared seals and sea lions)						
California sea lion	U.S.	-; N	296,750 (n/a; 153,337; 2011)	9,200	389	Abundant; year-round
Family Phocidae (earless seals)						
Harbor seal	California	-; N	30,968 (n/a; 27,348; 2012)	1,641	43	Rare; year-round
Northern elephant seal	California breeding	-; N	179,000 (n/a; 81,368; 2010)	4,882	8.8	Rare; year-round

¹Endangered Species Act (ESA) status: Endangered (E), Threatened (T)/MMPA status: Depleted (D). A dash (-) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR or which is determined to be declining and likely to be listed

under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated under the MMPA as depleted and as a strategic stock.

²NMFS marine mammal stock assessment reports online at: www.nmfs.noaa.gov/pr/sars/. CV is coefficient of variation; N_{\min} is the minimum estimate of stock abundance. In some cases, CV is not applicable.

³Potential biological removal, defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population size (OSP).

⁴These values, found in NMFS's SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (*e.g.*, commercial fisheries, ship strike).

Harbor Seals

Harbor seals inhabit coastal and estuarine waters and shoreline areas of the northern hemisphere from temperate to polar regions. The eastern North Pacific subspecies is found from Baja California north to the Aleutian Islands and into the Bering Sea. Multiple lines of evidence support the existence of geographic structure among harbor seal populations from California to Alaska (Carretta *et al.*, 2016). However, because stock boundaries are difficult to meaningfully draw from a biological perspective, three separate harbor seal stocks are recognized for management purposes along the west coast of the continental U.S.: (1) Washington inland waters (2) Oregon and Washington coast, and (3) California (Carretta *et al.*, 2016). Placement of a stock boundary at the California-Oregon border is not based on biology but is considered a political and jurisdictional convenience (Carretta *et al.*, 2016). In addition, harbor seals may occur in Mexican waters, but these animals are not considered part of the California stock. Only the California stock is expected to be found in the project area.

Harbor seals are not protected under the Endangered Species Act (ESA); the California stock is not listed as depleted under the MMPA, and is not considered a strategic stock under the MMPA because annual human-caused mortality (43) is significantly less than the calculated potential biological removal (PBR; 1,641) (Carretta *et al.*, 2016). The population appears to be stabilizing at what may be its carrying capacity and fishery mortality is declining. The best

abundance estimate of the California stock of harbor seals is 30,968 and the minimum population size of this stock is 27,348 individuals (Carretta *et al.*, 2016).

The beaches and rocks at, or near, the Children's Pool are known haul out sites for harbor seals. Starting in the mid-1990s there was an increase in numbers of harbor seals using the beaches and rocks in the area around Children's Pool (Yochem and Stewart 1998). As a result, the City commissioned several studies for harbor seal abundance trends at this site (Yochem and Stewart 1998; Hanan & Associates 2004, 2011). Abundances at any given time may range from a low of 0 to 15 seals to a maximum that rarely exceeds 200 seals at Children's Pool, and 250 individuals in the vicinity (Linder 2011; Hanan & Associates 2014).

When abundances are low, seals tend to cluster on the western side of Children's Pool, and when abundances are high, the seals spread out along the beach. A limiting factor to the maximum number of individuals observed at Children's Pool at any given time likely relates to the area available for haulouts (Linder 2011). Several factors influence the variability in harbor seal abundance, including daily foraging and resting patterns, season, weather conditions, and movements by transient individuals. Generally, the highest abundances occur during the months of April and May, at the end of the pupping season and beginning of the molting season (Linder 2011).

Radio tagging and photographic studies have identified that only a portion of seals utilizing a haulout site are present at any specific moment or day (Hanan 1996, 2005; Gilbert *et.al.* 2005; Harvey and Goley 2011; Linder 2011; Hanan & Associates 2014). These studies further indicate that seals are constantly moving along the coast, including to/from offshore islands (California Channel Islands, Las Islas Coronados). Linder (2011) estimated that there may be as many as 600 harbor seals using Children's Pool beach during a year associated with

the coastal movements of transient individuals, and suggested that the haul out at Children's Pool Beach is possibly part of a regional network of interconnected resting and pupping sites.

California sea lion

California sea lions range from the Gulf of California north to the Gulf of Alaska, with breeding areas located in the Gulf of California, western Baja California, and southern California. Five genetically distinct geographic populations have been identified: (1) Pacific Temperate, (2) Pacific Subtropical, (3) Southern Gulf of California, (4) Central Gulf of California and (5) Northern Gulf of California (Schramm *et al.*, 2009). Rookeries for the Pacific Temperate population are found within U.S. waters and just south of the U.S.-Mexico border, and animals belonging to this population may be found from the Gulf of Alaska to Mexican waters off Baja California. Animals belonging to other populations (*e.g.*, Pacific Subtropical) may range into U.S. waters during non-breeding periods. For management purposes, a stock of California sea lions comprising those animals at rookeries within the U.S. is defined (*i.e.*, the U.S. stock of California sea lions) (Carretta *et al.*, 2016). Pup production at the Coronado Islands rookery in Mexican waters is considered an insignificant contribution to the overall size of the Pacific Temperate population (Lowry and Maravilla-Chavez, 2005).

California sea lions are not protected under the ESA and the U.S. stock of California sea lions is not listed as depleted under the MMPA. Total annual human-caused mortality (389) is substantially less than the PBR (estimated at 9,200 per year); therefore, California sea lions are not considered a strategic stock under the MMPA. There are indications that the California sea lion may have reached or is approaching carrying capacity, although more data are needed to confirm that leveling in growth persists (Carretta *et al.*, 2016). The best abundance estimate of

the U.S. stock is 296,750 and the minimum population size of this stock is 153,337 individuals (Carretta *et al.*, 2016).

Beginning in January 2013, elevated strandings of California sea lion pups were observed in southern California, with live sea lion strandings nearly three times higher than the historical average. Findings to date indicate that a likely contributor to the large number of stranded, malnourished pups was a change in the availability of sea lion prey for nursing mothers, especially sardines. The Working Group on Marine Mammal Unusual Mortality Events determined that the ongoing stranding event meets the criteria for a UME and declared California sea lion strandings from 2013 through 2016 to be one continuous UME. The causes and mechanisms of this event remain under investigation (www.nmfs.noaa.gov/pr/health/mmume/californiasealions2013.htm).

California sea lions have been observed in the water, or on the beach or rocks at and near Children's Pool, though these areas are used only occasionally as haulout locations for the species (Yochem and Stewart 1998; Hanan & Associates 2004, 2011; Linder 2011). Monitoring associated with the Children's Pool Lifeguard Station construction project from June 28, 2015 – June 27, 2016 documented a total of 71 California sea lions on Children's Pool beach, as well as 83 California sea lions on seal rock (an outcropping approximately 91 m north of the beach); five California sea lions on South Casa Beach; and one California sea lion on the offshore reef off South Casa Beach (Hanan & Associates 2016). Observers recorded data only during construction, so it is possible there were more days throughout the year in which California sea lions hauled out on the beach. Evaluation of Children's Pool docent data from 2014 to 2016 (Seal Conservancy 2016), indicates that California sea lions were observed on Children's Pool beach on 67 days in 2014, 14 days in 2015, and 95 days in 2016.

Northern Elephant Seals

Northern elephant seals gather at breeding areas, located primarily on offshore islands of Baja California and California, from approximately December to March before dispersing for feeding. Males feed near the eastern Aleutian Islands and in the Gulf of Alaska, while females feed at sea south of 45° N (Stewart and Huber, 1993; Le Boeuf *et al.*, 1993). Adults then return to land between March and August to molt, with males returning later than females, before dispersing again to their respective feeding areas between molting and the winter breeding season. Populations of northern elephant seals in the U.S. and Mexico are derived from a few tens or hundreds of individuals surviving in Mexico after being nearly hunted to extinction (Stewart *et al.*, 1994). Given the recent derivation of most rookeries, no genetic differentiation would be expected. Although movement and genetic exchange continues between rookeries, most elephant seals return to their natal rookeries when they start breeding (Huber *et al.*, 1991). The California breeding population is now demographically isolated from the Baja California population and is considered to be a separate stock.

Northern elephant seals are not protected under the ESA and the California breeding population is not listed as depleted under the MMPA. Total annual human-caused mortality (8.8) is substantially less than the PBR (estimated at 4,882 per year); therefore, northern elephant seals are not considered a strategic stock under the MMPA. Modeling of pup counts indicates that the population has reached its Maximum Net Productivity Level, but has not yet reached carrying capacity (Carretta *et al.*, 2016). The best abundance estimate of the California breeding population of northern elephant seals is 179,000 and the minimum population size of this stock is 81,368 individuals (Carretta *et al.*, 2016).

Northern elephant seals have been observed in the water, or on the beach or rocks

at and near Children's Pool, though these areas are used only occasionally as haulout locations for the species (Yochem and Stewart 1998; Hanan & Associates 2004, 2011; Linder 2011). During monitoring associated with the Children's Pool Lifeguard Station construction project, juvenile northern elephant seals were documented on Children's Pool beach on a total of 26 days in the period from June 28, 2015 – June 27, 2016 (Hanan & Associates 2016), and 28 days in the period from June 28, 2014 – June 27, 2015 (Hanan & Associates 2015). Observers recorded data only during construction, so it is possible there were more days throughout the year in which elephant seals hauled out on the beach. Children's Pool docent data indicates that Northern elephant seals used the beach as a haulout location on 38 days in 2014 and 36 days in 2015 (Seal Conservancy 2016).

Potential Effects of Specified Activities on Marine Mammals and their Habitat

This section includes a summary and discussion of the ways that components of the specified activity may impact marine mammals and their habitat. The "Estimated Take by Incidental Harassment" section later in this document will include a quantitative analysis of the number of individuals that are expected to be taken by this activity. The "Negligible Impact Analysis and Determination" section will consider the content of this section, the "Estimated Take by Incidental Harassment" section, and the "Proposed Mitigation" section, to draw conclusions regarding the likely impacts of these activities on the reproductive success or survivorship of individuals and how those impacts on individuals are likely to impact marine mammal species or stocks.

Description of Sound Sources

Acoustic sources associated with the City's proposed activities are expected to include various types of construction and demolition equipment, such as jackhammers, concrete saws, cement pumps, and hand tools (Table 1). Sound sources may be pulsed or non-pulsed.

Pulsed sound sources (*e.g.*, sonic booms, explosions, gunshots, impact pile driving) produce signals that are brief (typically considered to be less than one second), broadband, atonal transients (ANSI 1986; Harris 1998; NIOSH 1998; ISO 2003; ANSI 2005) and occur either as isolated events or repeated in some succession. Pulsed sounds are all characterized by a relatively rapid rise from ambient pressure to a maximal pressure value followed by a rapid decay period that may include a period of diminishing, oscillating maximal and minimal pressures, and generally have an increased capacity to induce physical injury as compared with sounds that lack these features.

Non-pulsed sounds can be tonal, narrowband, or broadband, brief or prolonged, and may be either continuous or non-continuous (ANSI 1995; NIOSH 1998). Some of these non-pulsed sounds can be transient signals of short duration but without the essential properties of pulses (*e.g.*, rapid rise time). Examples of non-pulsed sounds include those produced by rocket launches and landings, vessels, aircraft, machinery operations such as drilling or dredging, and vibratory pile driving. The duration of such sounds, as received at a distance, can be greatly extended in a highly reverberant environment.

Sound travels in waves, the basic components of which are frequency, wavelength, velocity, and amplitude. Frequency is the number of pressure waves that pass by a reference point per unit of time and is measured in hertz (Hz) or cycles per second. Wavelength is the distance between two peaks of a sound wave; lower frequency sounds have longer wavelengths than higher frequency sounds and attenuate (decrease) more rapidly in shallower water.

Amplitude is the height of the sound pressure wave or the ‘loudness’ of a sound and is typically measured using the decibel scale. A dB is the ratio between a measured pressure (with sound) and a reference pressure (sound at a constant pressure, established by scientific standards). It is a logarithmic unit that accounts for large variations in amplitude; therefore, relatively small changes in dB ratings correspond to large changes in sound pressure. When referring to sound pressure levels (SPLs; the sound force per unit area), sound is referenced in the context of underwater sound pressure to 1 microPascal (μPa). One pascal is the pressure resulting from a force of one newton exerted over an area of one square meter. The source level (SL) represents the sound level at a distance of 1 m from the source (referenced to 1 μPa). The received level is the sound level at the listener’s position. Note that all underwater sound levels in this document are referenced to a pressure of 1 μPa and all airborne sound levels in this document are referenced to a pressure of 20 μPa .

Root mean square (rms) is the quadratic mean sound pressure over the duration of an impulse, and is calculated by squaring all of the sound amplitudes, averaging the squares, and then taking the square root of the average (Urick 1983). Root mean square accounts for both positive and negative values; squaring the pressures makes all values positive so that they may be accounted for in the summation of pressure levels (Hastings and Popper 2005). This measurement is often used in the context of discussing behavioral effects, in part because behavioral effects, which often result from auditory cues, may be better expressed through averaged units than by peak pressures.

Acoustic Effects

Here, we first provide background information on marine mammal hearing before discussing the potential effects of acoustic sources on marine mammals.

To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Current data indicate that not all marine mammal species have equal hearing capabilities (*e.g.*, Richardson et al., 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall et al. (2007) recommended that marine mammals be divided into functional hearing groups based on directly measured or estimated hearing ranges on the basis of available behavioral response data, audiograms derived using auditory evoked potential techniques, anatomical modeling, and other data. Subsequently, NMFS (2016) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65 dB threshold from the normalized composite audiograms, with the exception for lower limits for low-frequency cetaceans where the lower bound was deemed to be biologically implausible and the lower bound from Southall et al. (2007) retained. The functional groups and the associated frequencies are indicated below (note that these frequency ranges correspond to the range for the composite group, with the entire range not necessarily reflecting the capabilities of every species within that group):

- Low-frequency cetaceans (mysticetes): generalized hearing is estimated to occur between approximately 7 Hz and 35 kHz, with best hearing estimated to be from 100 Hz to 8 kHz;
- Mid-frequency cetaceans (larger toothed whales, beaked whales, and most delphinids): generalized hearing is estimated to occur between approximately 150 Hz and 160 kHz, with best hearing from 10 to less than 100 kHz;
- High-frequency cetaceans (porpoises, river dolphins, and members of the genera *Kogia* and *Cephalorhynchus*; including two members of the genus

Lagenorhynchus, on the basis of recent echolocation data and genetic data):

generalized hearing is estimated to occur between approximately 275 Hz and 160 kHz.

- Pinnipeds in water; Phocidae (true seals): generalized hearing is estimated to occur between approximately 50 Hz to 86 kHz, with best hearing between 1-50 kHz;
- Pinnipeds in water; Otariidae (eared seals): generalized hearing is estimated to occur between 60 Hz and 39 kHz, with best hearing between 2-48 kHz.

The pinniped functional hearing group was modified from Southall *et al.* (2007) on the basis of data indicating that phocid species have consistently demonstrated an extended frequency range of hearing compared to otariids, especially in the higher frequency range (Hemilä *et al.*, 2006; Kastelein *et al.*, 2009; Reichmuth and Holt, 2013).

For more detail concerning these groups and associated frequency ranges, please see NMFS (2016) for a review of available information. Three marine mammal species (one otariid and two phocid pinnipeds) have the reasonable potential to co-occur with the proposed survey activities. Please refer to Table 2.

The effects of sounds on marine mammals are dependent on several factors, including the species, size, behavior (feeding, nursing, resting, etc.), and depth (if underwater) of the animal; the intensity and duration of the sound; and the sound propagation properties of the environment. Impacts to marine species can result from physiological and behavioral responses to both the type and strength of the acoustic signature (Viada *et al.*, 2008). The type and severity of behavioral impacts are more difficult to define due to limited studies addressing the behavioral effects of sounds on marine mammals. Potential effects from impulsive sound sources can range

in severity from effects such as behavioral disturbance or tactile perception to physical discomfort, slight injury of the internal organs and the auditory system, or mortality (Yelverton *et al.*, 1973).

The effects of sounds from the proposed activities are expected to result in behavioral disturbance of marine mammals. Due to the expected sound levels of the equipment proposed for use and the distance of the planned activity from marine mammal habitat, the effects of sounds from the proposed activities are not expected to result in temporary or permanent hearing impairment (TTS and PTS, respectively), non-auditory physical or physiological effects, or masking in marine mammals. Data from monitoring reports associated with IHAs issued previously for similar activities in the same location as the planned activities provides further support for the assertion that TTS, PTS, non-auditory physical or physiological effects, and masking are not likely to occur (Hanan & Associates 2014; 2015; 2016). Therefore, TTS, PTS, non-auditory physical or physiological effects, and masking are not discussed further in this section.

Disturbance Reactions

Disturbance includes a variety of effects, including subtle changes in behavior, more conspicuous changes in activities, and displacement. Behavioral responses to sound are highly variable and context-specific and reactions, if any, depend on species, state of maturity, experience, current activity, reproductive state, auditory sensitivity, time of day, and many other factors (Richardson *et al.*, 1995; Wartzok *et al.*, 2003; Southall *et al.*, 2007).

Habituation can occur when an animal's response to a stimulus wanes with repeated exposure, usually in the absence of unpleasant associated events (Wartzok *et al.*, 2003). Animals are most likely to habituate to sounds that are predictable and unvarying. The opposite process is

sensitization, when an unpleasant experience leads to subsequent responses, often in the form of avoidance, at a lower level of exposure. Behavioral state may affect the type of response as well. For example, animals that are resting may show greater behavioral change in response to disturbing sound levels than animals that are highly motivated to remain in an area for feeding (Richardson *et al.*, 1995; NRC, 2003; Wartzok *et al.*, 2003).

Controlled experiments with captive marine mammals have shown pronounced behavioral reactions, including avoidance of loud underwater sound sources (Ridgway *et al.*, 1997; Finneran *et al.*, 2003). Observed responses of wild marine mammals to loud pulsed sound sources (typically seismic guns or acoustic harassment devices) have been varied but often consist of avoidance behavior or other behavioral changes suggesting discomfort (Morton and Symonds, 2002; Thorson and Reyff, 2006; see also Gordon *et al.*, 2004; Wartzok *et al.*, 2003; Nowacek *et al.*, 2007).

The onset of noise can result in temporary, short term changes in an animal's typical behavior and/or avoidance of the affected area. These behavioral changes may include (Richardson *et al.*, 1995): reduced/increased vocal activities; changing/cessation of certain behavioral activities (such as socializing or feeding); visible startle response or aggressive behavior; avoidance of areas where sound sources are located; and/or flight responses.

The biological significance of many of these behavioral disturbances is difficult to predict, especially if the detected disturbances appear minor. However, the consequences of behavioral modification could potentially be biologically significant if the change affects growth, survival, or reproduction. The onset of behavioral disturbance from anthropogenic sound depends on both external factors (characteristics of sound sources and their paths) and the

specific characteristics of the receiving animals (hearing, motivation, experience, demography) and is difficult to predict (Southall *et al.*, 2007).

Marine mammals that occur in the project area could be exposed to airborne sounds associated with construction and demolition activities that have the potential to result in behavioral harassment, depending on an animal's distance from the sound. Airborne sound could potentially affect pinnipeds that are hauled out. Most likely, airborne sound would cause behavioral responses similar to those discussed above in relation to underwater sound. For instance, anthropogenic sound could cause hauled out pinnipeds to exhibit changes in their normal behavior, such as reduction in vocalizations, or cause them to temporarily abandon their habitat and move further from the source. Hauled out pinnipeds may flush into the water, which can potentially result in pup abandonment. Site-specific monitoring data described below indicate that pup abandonment is not likely to occur at this site as a result of the specified activity.

Behavioral Responses of Pinnipeds to Construction and Demolition

The City has monitored pinniped responses to construction at Children's Pool beach for the past three years as a requirement of previously issued IHAs for construction of the lifeguard station on the bluffs above Children's Pool (NMFS 2013; 2014; 2015). The equipment associated with the planned construction and demolition activities at Coast Boulevard would be very similar to the equipment associated with the IHAs issued previously for the lifeguard station construction project, sound levels are expected to be substantially similar, and the project location and marine mammal species affected are expected to be the same. Thus, we rely on observational data on responses of pinnipeds to demolition and construction of the lifeguard

station at Children's Pool beach in drawing conclusions about expected pinniped responses to sound associated with the planned project.

NMFS previously issued three consecutive IHAs to the City of San Diego for the incidental take of marine mammals associated with the demolition of the existing lifeguard station at Children's Pool beach and the construction of a new lifeguard station at the same location, from June 2013 through June 2016 (NMFS 2013; 2014; 2015). The first IHA was effective June 28, 2013 through June 27, 2014; the second IHA was valid June 28, 2014 through June 27, 2015; the third IHA was valid June 28, 2015 through June 27, 2016. All of the IHAs authorized take of Pacific harbor seals, California sea lions, and northern elephant seals, in the form of Level B harassment, incidental to demolition and construction activities.

From 2013-2016, protected species observers collected data over a total of 3,376 hourly counts at seven sites around the project and Children's Pool beach. Observed reactions of pinnipeds at Children's Pool to demolition and construction of the lifeguard station ranged from no response to heads-up alerts, from startle responses to some movements on land, and some movements into the water (Hanan & Associates 2014; 2015; 2016). There were no documented occurrences of take by Level A harassment throughout the three years of monitoring (Hanan & Associates 2014; 2015; 2016). Data from the three years of monitoring also suggests there was no site abandonment on the part of harbor seals a result of the project (Hanan & Associates 2014; 2015; 2016). Based on the data from these three previously issued IHAs, we expect that any behavioral responses by pinnipeds to the planned project would be very similar to those that resulted from the previously authorized lifeguard station project: from no response to heads-up alerts, startle responses, some movements on land, and some movements into the water (flushing).

Estimated Take by Incidental Harassment

This section provides an estimate of the number of incidental takes proposed for authorization through this IHA, which will inform both NMFS' consideration of whether the number of takes is "small" and the negligible impact determination.

Harassment is the only type of take expected to result from these activities. Except with respect to certain activities not pertinent here, section 3(18) of the MMPA defines "harassment" as: any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

All authorized takes would be by Level B harassment only, in the form of disruption of behavioral patterns for individual marine mammals resulting from exposure to sounds associated with the planned construction and demolition activities. Based on the nature of the activity, Level A harassment is neither anticipated nor proposed to be authorized. The death of a marine mammal is also a type of incidental take. However, in the case of the planned project it is unlikely that injurious or lethal takes would occur even in the absence of the planned mitigation and monitoring measures, and no mortality is anticipated or proposed to be authorized for this activity. The current NMFS thresholds for behavioral harassment of pinnipeds from airborne noise are shown in Table 3.

Table 3: Current NMFS Criteria for Pinniped Harassment Resulting From Exposure to Airborne Sound.

Species	Level B harassment threshold	Level A harassment threshold
Harbor seals	90 dB re 20 μ Pa	Not defined

Other pinniped species	100 dB re 20 μ Pa	Not defined
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NMFS currently uses a three-tiered scale to determine whether the response of a pinniped on land to acoustic or visual stimuli is considered an alert, a movement, or a flush. NMFS considers the behaviors that meet the definitions of both movements and flushes to qualify as behavioral harassment. Thus a pinniped on land is considered by NMFS to have been behaviorally harassed if it moves greater than two times its body length, or if the animal is already moving and changes direction and/or speed, or if the animal flushes from land into the water. Animals that become alert without such movements are not considered harassed. See Table 4 for a summary of the pinniped disturbance scale.

Table 4. Levels of Pinniped Behavioral Disturbance on Land.

Level	Type of response	Definition
1	Alert	Seal head orientation or brief movement in response to disturbance, which may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, changing from a lying to a sitting position, or brief movement of less than twice the animal's body length.
2	Movement	Movements away from the source of disturbance, ranging from short withdrawals at least twice the animal's body length to longer retreats over the beach, or if already moving a change of direction of greater than 90 degrees.
3	Flush	All retreats (flushes) to the water.

Given the many uncertainties in predicting the quantity and types of impacts of sound on marine mammals, it is common practice to estimate how many animals are likely to be present within a particular distance of a given activity, or exposed to a particular level of sound. In practice, depending on the amount of information available to characterize daily and seasonal movement and distribution of affected marine mammals, it can be difficult to distinguish

between the number of individuals harassed and the instances of harassment and, when duration of the activity is considered, it can result in a take estimate that overestimates the number of individuals harassed. In particular, for stationary activities such as the proposed project, it is more likely that some smaller number of individuals may accrue a number of incidences of harassment per individual than for each incidence to accrue to a new individual, especially if those individuals display some degree of residency or site fidelity and the impetus to use the site is stronger than the deterrence presented by the harassing activity.

The take calculations presented here rely on the best information currently available for marine mammal populations in the Children's Pool area. Below we describe how the take was estimated for the planned project.

Pacific harbor seal

The take estimate for harbor seal was based on the following steps:

- 1) Estimate the total area (m²) of harbor seal haulout habitat available at Children's Pool;
- 2) Estimate the total area of available haulout habitat expected to be ensonified to the airborne Level B harassment threshold for harbor seals (90 dB re 20 µPa) based on total haulout area and the percentage of total haulout area expected to be ensonified to the Level B harassment threshold;
- 3) Estimate the daily number of seals exposed to sounds above Level B harassment threshold by multiplying the total area of haulout habitat expected to be ensonified to the Level B threshold by the expected daily number of seals on Children's Pool;
- 4) Estimate the total number of anticipated harbor seals taken over the duration of the project by multiplying the daily number of seals exposed to noise above the Level B

harassment threshold by the number of total project days in which project-related sounds may exceed the Level B harassment threshold.

As described above, Children's Pool is designated as a shared-use beach. The beach and surrounding waters are used for swimming, surfing, kayaking, diving, tide pooling, and nature watching, thus the beach is shared between humans and pinnipeds. To discourage people from harassing pinnipeds hauled out on the beach, a guideline rope, oriented parallel to the water, bisects the beach into upper (western) and lower (eastern) beach areas; people are encouraged to stay on the western side of the guideline rope, allowing seals to use the eastern section of beach that provides access to the water. The City's estimate of available pinniped habitat was based on the total area of the beach between the guideline rope and the mean lower low water line. Thus, the area considered for this analysis to be available as haulout habitat is the total area east of the rope and west of the mean lower low water line, while the area west of the rope is assumed to be unavailable as pinniped habitat (See Figure 5 in the IHA application for the location of the guideline rope, and the area assumed to be available haulout habitat). The City estimated that there are 2,509 m² east of the guideline rope; therefore it is assumed that there is a total of 2,509 m² of available pinniped habitat on Children's Pool (Figure 5 in IHA application).

The City estimated the area of available harbor seal habitat at Children's Pool beach that would be ensonified to the Level B harassment threshold by estimating the distance to the Level B harassment threshold from sounds associated with the planned activities, then calculating the percentage of available haulout habitat at Children's Pool that would be ensonified to that threshold based on the total available habitat and the distance to the Level B harassment threshold.

To estimate the distance to the in-air Level B harassment threshold for harbor seals (90 dB rms) for the planned project, the City first used a spherical spreading loss model, assuming average atmospheric conditions. The spreading loss model predicted that the 90 dB isopleth would be reached at 10 m (33 ft). However, data from in situ recordings conducted during the lifeguard station project at Children's Pool indicated that peak sound levels of 90 to 103 dB were recorded at distances of 15 m to 20 m (49 to 66 ft) from the source when the loudest construction equipment (source levels ranging from 100 to 110 dB) was operating. The City estimated that the loudest potential sound sources associated with the planned project would be approximately 110 dB rms (Table 1), based on manufacturer specifications and previous recordings of similar equipment used during the lifeguard station project at Children's Pool (Hanan & Associates 2014; 2015; 2016). Therefore, the City estimated that for the sound sources expected to result in the largest isopleths (those with SLs estimated at up to 110 dB), the area expected to be ensonified to the in-air Level B harassment threshold for harbor seals (90 dB rms) would extend to approximately 20 m from the sound source. To be conservative, the City used this distance (20 m) based on the data from previous site-specific monitoring, rather than the results of the spherical spreading loss model, to estimate the predicted distance to the in-air Level B harassment threshold for harbor seals.

Based on the estimated distance to the in-air Level B harassment threshold for harbor seals (20 m from the sound source), the City estimated 647 m² of total available harbor seal habitat at Children's Pool beach would be ensonified to the Level B harassment threshold, the City therefore estimated that approximately 25.8 percent (647/2,509) of available harbor seal haulout habitat at Children's Pool beach would be ensonified to the Level B harassment

threshold (Figure 5 in IHA application). This information has been used to derive the take estimate only; the entire beach would be observed in order to document potential actual take.

The estimated daily take of harbor seals was based on the number of harbor seals expected to occur daily in the area ensonified to the Level B harassment threshold. In their IHA application, the City estimated that 200 harbor seals would be present on Children's Pool beach per day, based on literature that reported this number as the maximum number of seals recorded at Children's Pool (Linder 2011). However, NMFS believes it is more appropriate to use the average number of seals observed on Children's Pool beach, as opposed to the maximum number of seals, to estimate the likely number of takes of harbor seals as a result of the planned project. During 3,376 hourly counts associated with monitoring for IHAs issued for construction and demolition at the lifeguard station at Children's Pool in 2013-14, 2014-15, and 2015-16, there was an average of 54.5 harbor seals (including pups) recorded daily on Children's Pool beach (pers. comm., D. Hanan, Hanan & Associates, to J. Carduner, NMFS, April 04, 2017). We therefore estimated that 55 harbor seals would occur on Children's Pool per day, and used this number to estimate take of harbor seals as a result of the planned project. Based on an estimate of 55 total harbor seals on Children's Pool per day, and an estimated 25.8 percent of total haulout habitat ensonified to the Level B harassment threshold for harbor seals, we estimated that an average of 14.2 (rounded to 15) takes of harbor seals by Level B harassment would occur per day.

The City estimated that the total duration of the project would be 164 days. However, activities involving equipment that could result in sound source levels of 101-110 dB would occur on a maximum of 108 project days (pers. comm., D. Langsford, Tierra Data, to, J. Carduner, NMFS, April 03, 2017). Based on the distance of the project to Children's Pool and

previous monitoring reports, we believe it is unlikely that project-related activities with expected source levels at or below 100 dB rms would result in sound exposure levels at or above 90 dB among any pinnipeds at Children's Pool. Planned project-related activities would occur on top of a natural cliff in an area of increasing elevation above the beach, therefore we do not believe visual stimuli from the project would result in behavioral harassment of any marine mammals. Therefore, we do not expect that activities with expected source levels of 100 dB and below would result in take of marine mammals. Thus, our take estimate is based on the number of days in which source levels associated with the planned project could be between 100 and 110 dB rms. Based on an estimate of 15 takes of harbor seals per day by Level B harassment, over a total of 108 days the project would be expected to result in a total of 1,620 takes of harbor seals by Level B harassment. We therefore propose to authorize a total of 1,620 incidental takes of harbor seals by Level B harassment only. The City requested authorization for the 8,528 takes of harbor seals, however, based on the rationale described above, we propose to authorize 1,620 incidental takes of 1,620 harbor seals.

California sea lion

As described above, California sea lions are occasional visitors to Children's Pool. The most reliable estimates of likely California sea lion occurrence in the project area come from monitoring reports associated with IHAs issued previously for demolition and construction of the lifeguard station at Children's Pool. In 2015-16 there were 71 observations of California sea lions on Children's Pool over 209 days of monitoring, for an average of one California sea lion observed on Children's Pool approximately every three days. Based on this ratio, we estimate that a total of 55 observations of California sea lions on Children's Pool during the entire duration of the project (164 days); however as described above we do not think take is likely to

occur on days in which source levels are below 100 dB. We expect one take of California sea lion would occur for every 3 days of the project in which source levels are anticipated to be between 101-110 dB (108 total days). We therefore propose to authorize 36 incidental takes of California sea lions by Level B harassment only. This is considered a conservative estimate as the threshold for Level B harassment for California sea lions is different than that for harbor seals (Table 3). The City requested authorization for 100 takes of California sea lions, however we instead propose to authorize 36 incidental takes of California sea lions.

Northern elephant seal

As described above, northern elephant seals are occasional visitors to Children's Pool. The most reliable estimates of likely northern elephant seal occurrence in the project area come from monitoring reports associated with IHAs issued previously for demolition and construction of the lifeguard station at Children's Pool. In 2015-16 there were 26 observations of northern elephant seals on Children's Pool over 209 days of monitoring, for an average of one northern elephant seal observed on Children's Pool approximately every eight days. Based on this ratio, we estimate a total of 20 northern elephant seals would be observed on Children's Pool during the entire duration of the project (164 days); however as described above we do not think take is likely to occur on days in which source levels are below 100 dB. We expect one northern elephant seal take would occur for every eight days of the project in which source levels are anticipated to be between 101-110 dB (108 total days). We therefore propose to authorize 14 incidental takes of northern elephant seals by Level B harassment only. This is considered a conservative estimate as the threshold for Level B harassment for northern elephant seals is different than that for harbor seals (Table 3). The City requested authorization for 50 takes of

northern elephant seals, however we instead propose to authorize 14 incidental takes of northern elephant seals.

Table 5. Summary of Estimated Numbers of Marine Mammals Potentially Taken by the Planned Project.

Species	Level A takes	Level B takes	Total
Harbor seal	0	1,620	1,620
California sea lion	0	36	36
Northern elephant seal	0	14	14

Effects of Specified Activities on Subsistence Uses of Marine Mammals

There are no relevant subsistence uses of marine mammals implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

Proposed Mitigation

In order to issue an IHA under Section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for certain subsistence uses (latter not applicable for this action). NMFS regulations require applicants for incidental take authorizations to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting such activity or other means of effecting the least practicable adverse impact upon the affected species or stocks and their habitat (50 CFR 216.104(a)(11)).

In evaluating how mitigation may or may not be appropriate to ensure the least practicable impact on species or stocks and their habitat, as well as subsistence uses where applicable, we carefully balance two primary factors: 1) the manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat – which considers the nature of the potential adverse impact being mitigated (likelihood, scope, range), as well as the likelihood that the measure will be effective if implemented; and the likelihood of effective implementation, and; 2) the practicability of the measures for applicant implementation, which may consider such things as cost, impact on operations, and, in the case of a military readiness activity, personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

Any mitigation measure(s) prescribed by NMFS should be able to accomplish, have a reasonable likelihood of accomplishing (based on current science), or contribute to the accomplishment of one or more of the general goals listed below:

1. Avoidance or minimization of injury or death of marine mammals wherever possible (goals 2, 3, and 4 may contribute to this goal).
2. A reduction in the numbers of marine mammals (total number or number at biologically important time or location) exposed to activities expected to result in the take of marine mammals (this goal may contribute to 1, above, or to reducing harassment takes only).
3. A reduction in the number of times (total number or number at biologically important time or location) individuals would be exposed to activities expected to result in the take of marine mammals (this goal may contribute to 1, above, or to reducing harassment takes only).
4. A reduction in the intensity of exposures (either total number or number at biologically

important time or location) to activities expected to result in the take of marine mammals (this goal may contribute to 1, above, or to reducing the severity of harassment takes only).

5. Avoidance or minimization of adverse effects to marine mammal habitat, paying special attention to the food base, activities that block or limit passage to or from biologically important areas, permanent destruction of habitat, or temporary destruction/disturbance of habitat during a biologically important time.

6. For monitoring directly related to mitigation – an increase in the probability of detecting marine mammals, thus allowing for more effective implementation of the mitigation.

Mitigation for Marine Mammals and their Habitat

The City has proposed several mitigation measures. These measures include the following:

- Moratorium during harbor seal pupping season: Demolition and construction would be prohibited during the Pacific harbor seal pupping season (December 15th to May 15th) and for an additional two weeks to accommodate lactation and weaning of late season pups. Thus construction would be prohibited from December 15th to May 29th. This measure is designed to avoid any potential adverse impacts to pups that may otherwise occur, such as abandonment by mothers as a result of harassment.
- Activities limited to daylight hours only: Construction and demolition would be limited to daylight hours only (7 a.m. to 7 p.m., or 30 minutes before sunset depending on time of year). This measure is designed to facilitate the ability of MMOs to effectively monitor potential instances of harassment and to accurately document behavioral responses of pinnipeds to project-related activities.

- **Timing constraints for very loud equipment:** To minimize potential impacts to marine mammals, construction and demolition activity involving use of very loud equipment (*e.g.*, jackhammers) would be scheduled during the daily period of lowest pinniped haul-out occurrence, between the hours of 8:30 a.m. to 3:30 p.m., to the maximum extent practical. This measure is designed to minimize the number of pinnipeds exposed to sounds that may result in harassment. Construction and demolition may be extended from 7 a.m. to 7 p.m. (daylight hours only) to help ensure the project is completed in 2017, prior to the moratorium during the harbor seal pupping season starting December 15th, so as to reduce the overall duration of the project.
- **Marine mammal observers (MMO):** Trained MMOs would be used to detect and document project-related impacts to marine mammals, including any behavioral responses to the project. This measure is designed to facilitate the City's ability to increase the understanding of the effects of the action on marine mammal species and stocks. More information about this measure is contained in the "Proposed Monitoring" section below.

Based on our evaluation of the applicant's proposed measures, NMFS has preliminarily determined that the proposed mitigation measures provide the means effecting the least practicable impact on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Proposed Monitoring and Reporting

In order to issue an IHA for an activity, Section 101(a)(5)(D) of the MMPA states that NMFS must set forth, requirements pertaining to the monitoring and reporting of such taking. The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for

authorizations must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the proposed action area. Effective reporting is critical both to compliance as well as ensuring that the most value is obtained from the required monitoring.

Monitoring and reporting requirements prescribed by NMFS should contribute to improved understanding of one or more of the following:

- Occurrence of marine mammal species or stocks in the area in which take is anticipated (*e.g.*, presence, abundance, distribution, density).
- Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) action or environment (*e.g.*, source characterization, propagation, ambient noise); (2) affected species (*e.g.*, life history, dive patterns); (3) co-occurrence of marine mammal species with the action; or (4) biological or behavioral context of exposure (*e.g.*, age, calving or feeding areas).
- Individual marine mammal responses (behavioral or physiological) to acoustic stressors (acute, chronic, or cumulative), other stressors, or cumulative impacts from multiple stressors.
- How anticipated responses to stressors impact either: (1) long-term fitness and survival of individual marine mammals; or (2) populations, species, or stocks.
- Effects on marine mammal habitat (*e.g.*, marine mammal prey species, acoustic habitat, or other important physical components of marine mammal habitat).
- Mitigation and monitoring effectiveness.

Proposed Monitoring

The City has developed a Monitoring Plan specific to the project which establishes protocols for both acoustic and marine mammal monitoring. The objectives of the Monitoring Plan are to observe and document real-time sound levels in the project area, to document observed behavioral responses to project activities, and to record instances of marine mammal harassment. Monitoring would be conducted before, during, and after project activities to evaluate the impacts of the project on marine mammals. The Monitoring Plan can be found in Appendix C of the City's IHA application.

The Monitoring Plan encompasses both acoustic monitoring and marine mammal monitoring. Marine mammal monitoring would be conducted to assess the number and species, behavior, and responses of marine mammals to project-related activities as well as other sources of disturbance, as applicable. Acoustic monitoring would measure in-air sound pressure levels during ambient conditions and during project activities to measure sound levels associated with the project and to determine distances within which Level B acoustic harassment disturbance are expected to occur. More details are provided below.

Acoustic monitoring

Monitors would collect real-time acoustic data of construction activities to determine SPL values during demolition and construction activities, and to determine distances to zones within which SPLs are expected to meet or exceed airborne Level B harassment thresholds for harbor seals and other pinnipeds. Environmental data would also be collected to provide information on the weather, visibility, sea state, and tide conditions during monitoring surveys.

Sound level meters would be used to document SPLs at near-field and far-field locations during all surveys, and to determine the distances to Level B harassment thresholds. Far-field

locations will include the western end of the beach, the middle of the guideline rope and the eastern edge of the beach. The total number and locations of the monitoring stations would be determined during each survey based on the location of construction activities and likelihood for sound levels to meet or exceed in-air SPL harassment thresholds in areas where marine mammals are observed at Children's Pool. Refer to Section 3 of the Monitoring Plan for further details on the acoustic monitoring plan.

Marine mammal monitoring

Marine mammal monitoring would be conducted by qualified MMOs to document behavioral responses of marine mammals to the planned project. Monitors would document the behavior of marine mammals, the number and types of responses to disturbance, and the apparent cause of any reactions. Marine mammals displaying behavioral responses to disturbance would be assessed for the apparent cause of disturbance. All responses to stimuli related to the project would be documented; responses that rise to the level of behavioral harassment (Table 4) would be documented as takes.

Marine mammal observations may be made from vantage points on the beach or from overlook areas that provide an unobstructed view of the beach. Monitoring on the beach would be behind the guideline rope to minimize potential disturbance to hauled out marine mammals.

The following data would be collected during the marine mammal monitoring surveys:

- Dates and times of marine mammal observations.
- Location of observations
- Construction activities occurring during each observation period. Any substantial change in construction activities (especially cessation) during observation periods should be noted.

- Human activity in the area; number of people on the beach, adjacent overlooks, and in the water.
- Counts by species of pinnipeds, and if possible sex and age class.
- Number and type of responses to disturbance, such as alert, flush, vocalization, or other with a description.
- Apparent cause of reaction.

The extent of marine mammal monitoring required would depend on recorded sound levels of the activities performed; sound levels would be verified through acoustic monitoring as described above. At the start of each new phase of demolition and construction (*i.e.*, same type of activity and equipment), a full day of marine mammal monitoring would occur. This monitoring would include a Pre-Construction Activity Survey, hourly Construction Activity Surveys, and a Post-Construction Activity Survey. Pre-Construction Activity Surveys would include recordings of the times of observations, environmental conditions, and maximum ambient SPLs at the recording location at the top of the bluff adjacent to the project site, and at the three far-field locations, and would occur at least 30 minutes prior to the start of construction activities. Hourly Construction Activity Surveys would record times of observations, environmental conditions, and maximum SPLs at near-field and far-field locations. Post-Construction Activity Surveys would record times of observations, environmental conditions, and maximum ambient SPLs at all monitoring locations surveyed during the Construction Activity Surveys. Marine mammal monitoring data will be collected, as noted above. The number of days of subsequent monitoring required after the first day of monitoring for each new construction phase would depend on the results of acoustic monitoring, as follows:

- (a) If Acoustic monitoring on the first day of a new phase of construction documents sound levels of 90 dB rms or greater at any far-field location, then daily monitoring would be required throughout that phase of construction.
- (b) If Acoustic monitoring on the first day of a new phase of construction documents sound levels of 90 dB rms or greater at the near-field location, but not at any far-field location, then a minimum of two additional days of monitoring would be required to confirm far-field sound levels remain less than 90 dB rms for construction phase durations of less than 4 weeks. Monitoring would be conducted weekly to confirm far-field sound levels remain less than 90 dB rms for construction phase durations of greater than 4 weeks. If during the additional monitoring, sound levels of 90 dB or greater are recorded at any far-field location, then daily monitoring would be required until the end of that construction phase.
- (c) If Acoustic monitoring on the first day of a new phase of construction documents sound levels of less than 90 dB rms at the near-field location(s), then one additional day of monitoring would be conducted to confirm near-field sound levels remain less than 90 dB rms. If a sound level of greater than 90 dB rms is measured at the near-field location on the second day of monitoring, then additional days of monitoring would be conducted consistent with the specification listed under item (b) above.

Marine mammal monitoring would be conducted by a qualified MMO with the following minimum qualifications:

- Visual acuity in both eyes (correction is permissible) sufficient for discernment of moving targets at the water's surface, with the ability to estimate target size and distance; use of binoculars may be necessary to correctly identify the target;
- A minimum of a Bachelor's degree in biological science, wildlife management, mammalogy, or related field;
- Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience).
- Experience or training in the field identification of marine mammals, and identification of marine mammal behavior;
- Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;
- Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area, as needed; and
- Writing skills sufficient to prepare a report of observations.

As noted above, Guadalupe and northern fur seals would be considered extralimital to the project area; however, as fur seals have been occasionally observed in the area, the MMO would ensure that take of fur seals is avoided. In the event that a fur seal or another species of marine mammal for which take is not authorized in the IHA, if issued, are observed either on the rocks, beach, or in the water at Children's Pool prior to commencement of activities, the MMO would alert the stranding network, as the occurrence of these species would typically indicate a sick/injured animal, and activities would be postponed until coordination with the stranding network is complete (including any potential 24-hour or 48-hour wait/observation period) and/or the animal either leaves, or is collected by the stranding network.

Marine mammal monitoring protocols are described in greater detail in Section 4 of the City's Monitoring Plan.

Proposed Reporting

A final monitoring report would include data collected during marine mammal monitoring and acoustic and environmental monitoring as described above. The monitoring report would include a narrative description of project related activities, counts of marine mammals by species, sex and age class, a summary of marine mammal species/count data, a summary of marine mammal responses to project-related disturbance, and responses to other types of disturbances. The monitoring report would also include a discussion of seasonal and daily variations in the abundance of marine mammals at Children's Pool, the relative percentage of marine mammals observed to react to construction activities and their observed reactions, and the number of marine mammals taken as a result of the project based on the criteria shown in Table 4.

A draft report would be submitted to NMFS within 60 calendar days of the completion of acoustic measurements and marine mammal monitoring. The results would be summarized in tabular/graphical forms and include descriptions of acoustic sound levels and marine mammal observations according to type of construction activity and equipment. A final report would be prepared and submitted to NMFS within 30 days following receipt of comments on the draft report from NMFS. Proposed reporting measures are described in greater detail in Section 6 of the City's Monitoring Plan.

If issued, this would be the first IHA issued for the planned activity. Monitoring reports from IHAs issued to the City in 2013, 2014, and 2015 for the lifeguard station construction project at Children's Pool reported that pinniped responses to that project ranged from no

response to heads-up alerts, from startle responses to some movements on land, and some movements into the water (Hanan & Associates 2014; 2015; 2016). There were no documented occurrences of Level A takes throughout the three years of monitoring (Hanan & Associates 2014; 2015; 2016). Data from the three years of monitoring indicates no site abandonment by harbor seals a result of the project (Hanan & Associates 2014; 2015; 2016). Monitoring reports from previous IHAs issued to the City for lifeguard tower construction at Children's Pool can be found on our web site at: www.nmfs.noaa.gov/pr/permits/incidental/construction.htm. The monitoring report from the previous IHA issued to the City for a sand quality study at Children's Pool can be found on our web site at: www.nmfs.noaa.gov/pr/permits/incidental/research.htm.

Negligible Impact Analysis and Determination

NMFS has defined negligible impact as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.*, population-level effects).

An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be "taken" through harassment, NMFS considers other factors, such as the likely nature of any responses (*e.g.*, intensity, duration), the context of any responses (*e.g.*, critical reproductive time or location, migration), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS's implementing regulations (54 FR 40338; September 29, 1989), the

impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the environmental baseline (*e.g.*, as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

If a marine mammal responds to a stimulus by changing its behavior (*e.g.*, through relatively minor changes in locomotion direction/speed or vocalization behavior), the response may or may not constitute taking at the individual level, and is unlikely to affect the stock or the species as a whole. However, if a sound source displaces marine mammals from an important feeding or breeding area for a prolonged period, impacts on animals or on the stock or species could potentially be significant (*e.g.*, Lusseau and Bejder 2007; Weilgart 2007).

Although the City's planned activities may disturb pinnipeds hauled out at Children's Pool, any project-related impacts are expected to occur to a small, localized group of marine mammals, in relation to the overall stocks of marine mammals considered here. Pinnipeds would likely become alert or, at most, flush into the water in response to sounds from the planned project. Disturbance is not expected to occur during particularly sensitive times for any marine mammal species, as mitigation measures have been specifically designed to avoid project-related activity during harbor seal pupping season to eliminate the possibility for pup injury or mother-pup separation. No injury, serious injury, or mortality is anticipated, nor is the proposed action likely to result in long-term impacts such as permanent abandonment of the haulout (Hanan & Associates 2016).

Children's Pool is not known as an important feeding area for harbor seals, but does serve as a harbor seal rookery. Therefore, if displacement of seals or adverse effects to pups were an expected outcome of the planned activity, impacts to the stock could potentially result. However,

site abandonment is not expected to occur as a result of the planned project. We base this expectation on results of previous monitoring reports from the three consecutive IHAs issued to the City for construction and demolition of the lifeguard station at Children's Pool. Over three-plus years of consecutive monitoring (2013-2016) there was no site abandonment by harbor seals as a result of the project (Hanan & Associates 2014; 2015; 2016). Adverse effects to pups are not expected to occur. The moratorium on project-related activity during the harbor seal pupping season (December 15-May 15) is expected to minimize any potential adverse effects to pups such as mother-pup separation. Takes of harbor seal as a result of the project are expected to be low relative to stock size (approximately five percent). Additionally, as there are an estimated 600 harbor seals using Children's Pool beach during a year (Linder 2011), proposed authorized takes of harbor seals (Table 5) are expected to be repeated incidences of take to a smaller number of individuals, and not individuals taken, as described above. These takes are not expected to interfere with breeding, sheltering or feeding. For the reasons stated above, we do not expect the planned project to affect annual rates of recruitment or survival for harbor seals.

Children's Pool does not represent an important feeding or breeding area for either northern elephant seals or California sea lion, and neither species uses the project location as a pupping site. Takes of both species are expected to be very low relative to the stock sizes (less than one percent of the stock for each species) and no take by Level A harassment is anticipated to occur as a result of the project for either northern elephant seals or California sea lions. Takes that occur are expected to be in the form of behavioral harassment, specifically changes in direction or possibly flushing to the water. These takes are not expected to interfere with breeding, sheltering or feeding. For the reasons stated above, we do not expect the planned

project to affect annual rates of recruitment or survival for northern elephant seals or California sea lions.

In summary and as described above, the following factors primarily support our preliminary determination that the impacts resulting from this activity are not expected to adversely affect the species or stock through effects on annual rates of recruitment or survival:

- No mortality is anticipated or authorized.
- No injury is expected. Over the course of 3,376 hourly counts associated with monitoring for IHAs issued to the City for construction and demolition of the lifeguard station at Children's Pool in 2013-14, 2014-15, and 2015-16, no takes by Level A harassment were documented. As the planned project would entail equipment with similar expected sound levels to those that occurred during the lifeguard station project at Children's Pool, but would occur further from the haulout location than the lifeguard station project, we do not expect take by Level A harassment to occur as a result of the planned project.
- Behavioral disturbance – Takes are expected to be in the form of behavioral disturbance only. Based on the sound levels anticipated and based on the monitoring reports from previous IHAs issued for similar activities at the same location, behavioral responses are expected to range from no response to alerts, to movements or changes in direction, to possible movements into the water (flushes). Planned mitigation described above is expected to limit the number and/or severity of behavioral responses, and those that occur are not expected to be severe.
- Important Areas – As described above, there are no important feeding, breeding or pupping areas that would be affected by the planned project for northern elephant

seals and California sea lions. For harbor seal, Children's Pool represents a pupping location. However, as described above, mitigation measures including the moratorium during pupping season (December 15 to May 15) are expected to avoid any potential impacts to pups, such as mother-pup separation. Data from the three years of monitoring suggests that despite documented instances of harassment resulting from the lifeguard station project, there was no site abandonment a result of the project (Hanan & Associates 2014; 2015; 2016). Therefore, the planned project is not expected to negatively affect pups of any species, and is not expected to result in any impacts to annual rates of recruitment or survival.

- Species/Stock scale – As described above, the planned project would impact only a very small percentage of the stocks (approximately five percent for harbor seal, less than one percent for northern elephant seal and California sea lion) and would only impact all marine mammal stocks over a very small portion of their ranges.
- Species/stock status – No marine mammal species for which take authorization is proposed are listed as threatened or endangered under the ESA and no mammal stocks for which take authorization is proposed are determined to be strategic or depleted under the MMPA.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed monitoring and mitigation measures, NMFS preliminarily finds that the total marine mammal take from the proposed activity will have a negligible impact on all affected marine mammal species or stocks.

Small Numbers

As noted above, only small numbers of incidental take may be authorized under Section 101(a)(5)(D) of the MMPA for specified activities other than military readiness activities. The MMPA does not define small numbers and so, in practice, NMFS compares the number of individuals taken to the most appropriate estimation of abundance of the relevant species or stock in our determination of whether an authorization is limited to small numbers of marine mammals.

The numbers of marine mammals authorized to be taken for harbor seal, California sea lion, and northern elephant seal, would be considered small relative to the relevant stocks or populations (approximately five percent for harbor seal and less than one percent for northern elephant seal and California sea lion) even if each estimated take occurred to a new individual. However we believe it is extremely unlikely that each estimated take would occur to a new individual, and more likely that multiple takes would accrue to the same individuals.

As described above, depending on the amount of information available to characterize daily and seasonal movement and distribution of affected marine mammals, it can be difficult to distinguish between the number of individuals harassed and the instances of harassment, and this can result in a take estimate that overestimates the number of individuals harassed. In particular, for stationary activities, such as the proposed project, it is more likely that some smaller number of individuals may accrue a number of incidences of harassment per individual than for each incidence to accrue to a new individual. This is especially true for those individuals display some degree of residency or site fidelity and the impetus to use the site is stronger than the deterrence presented by the harassing activity, as is the case with harbor seals that use Children's Pool as a haulout.

For the reasons described above, we expect that there will almost certainly be some overlap in individuals present day-to-day at the project site, and the proposed total numbers of authorized takes are expected to occur only within a small portion of the overall regional stocks. Thus while we propose to authorize the instances of incidental take shown in Table 6, we believe that the number of individual marine mammals that would be incidentally taken by the proposed project would be substantially lower than these numbers.

Table 6. Estimated Numbers of Take and Percentages of Marine Mammal Stocks That May Be Taken.

Species	Proposed Level B Take Authorized	Stock Abundance Estimate ¹	Percentage of Stock or Population
Harbor seal	1,620	30,968	5 percent
California sea lion	36	296,750	<1 percent
Northern elephant seal	14	179,000	<1 percent

¹NMFS 2015 marine mammal stock assessment reports (Carretta *et al.*, 2016) available online at: www.nmfs.noaa.gov/pr/sars/.

Based on the analysis contained herein of the proposed activity (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS preliminarily finds that small numbers of marine mammals will be taken relative to the population size of the affected species or stocks.

Unmitigable Adverse Impact Analysis and Determination

There are no relevant subsistence uses of the affected marine mammal stocks or species implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

Endangered Species Act (ESA)

Section 7(a)(2) of the Endangered Species Act of 1973 (ESA: 16 U.S.C. § 1531 *et seq.*) requires that each Federal agency insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. To ensure ESA compliance for the issuance of IHAs, NMFS consults internally with our ESA Interagency Cooperation Division whenever we propose to authorize take for endangered or threatened species.

No incidental take of ESA-listed species is proposed for authorization or expected to result from this activity. Therefore, NMFS has determined that formal consultation under section 7 of the ESA is not required for this action.

Proposed Authorization

As a result of these preliminary determinations, NMFS proposes to issue an IHA to the City of San Diego for conducting demolition and construction at Coast Boulevard, La Jolla, California, from June 1, 2017 through December 14, 2017, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. This section contains a draft of the IHA itself. The wording contained in this section is proposed for inclusion in the IHA (if issued).

1. This Incidental Harassment Authorization (IHA) is valid from June 1, 2017 through December 14, 2017. This IHA is valid only for demolition and construction activities associated with the public parking lot, sidewalk, and landscaping improvement project at Coast Boulevard in La Jolla, California.
2. General Conditions
 - (a) A copy of this IHA must be in the possession of the City, its designees, and work crew personnel operating under the authority of this IHA.

- (b) The species authorized for taking are the Pacific harbor seal (*Phoca vitulina*), California sea lion (*Zalophus californianus*), and northern elephant seal (*Mirounga angustirostris*).
- (c) The taking, by Level B harassment only, is limited to the species listed in condition 2(b).
- (d) The take by injury (Level A harassment), serious injury, or death, or the taking of any other species of marine mammal not listed in condition 2(b), is prohibited and may result in the modification, suspension, or revocation of this IHA.
- (e) The City shall conduct briefings between construction supervisors and crews, marine mammal monitoring team, and acoustical monitoring team prior to the start of all demolition and construction activities, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.

3. Mitigation Measures

The holder of this Authorization is required to implement the following mitigation measures.

- (a) Demolition and construction shall be prohibited during the Pacific harbor seal pupping season (December 15th to May 15th) and for an additional two weeks to accommodate lactation and weaning of late season pups.
- (b) Demolition and construction shall be limited to daylight hours only (7:00 a.m. to 7:00 p.m., or 30 minutes before sunset depending on time of year).
- (c) Construction and demolition activity involving use of very loud equipment (*e.g.*, jackhammers) shall be scheduled between the hours of 8:30 a.m. to 3:30 p.m., to

the maximum extent practical, but may be extended from 7:00 a.m. to 7:00 p.m. (daylight hours only).

- (d) Monitoring shall be conducted by a trained marine mammal observer (MMO).
 - (i) The MMO shall have no other construction-related tasks while conducting monitoring and shall be trained on species identification, how to observe, and how to fill out the data sheets prior to any construction or demolition activities.
 - (ii) Monitoring shall take place from 30 minutes prior to initiation of demolition or construction activity through 30 minutes post-completion of such activity.
 - (iii) The MMO shall have the following minimum qualifications:
 1. Visual acuity in both eyes (correction is permissible) sufficient for discernment of moving targets at the water's surface with ability to estimate target size and distance; use of binoculars may be necessary to correctly identify the target;
 2. A minimum of a Bachelor's degree in biological science, wildlife management, mammalogy, or related field;
 3. Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience);
 4. Experience or training in the field identification of marine mammals, and identification of marine mammal behavior;

5. Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;
6. Writing skills sufficient to prepare a report of observations; and
7. Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area as necessary.

4. Monitoring

The holder of this Authorization is required to implement the following monitoring measures:

- (a) The City shall collect sighting data and shall record observed behavioral responses to project activities for marine mammal species observed in the region of activity during the period of activity;
- (b) All visual marine mammal information shall be recorded as described in the Monitoring Plan (Appendix C, Section 4 of the IHA Application) and shall include the following:
 - (i) Dates and times of marine mammal observations;
 - (ii) Location of observations (description);
 - (iii) Construction activities occurring during each observation period including any substantial change in construction activities;
 - (iv) Human activity in the area;
 - (v) Counts by species of pinnipeds, and if possible sex and age class;
 - (vi) Number and type of marine mammal responses to disturbance; and

- (vii) Apparent causes of marine mammal responses (*e.g.*, construction project, aircraft, human activity, other pinniped, other animal, swimmer/diver, watercraft, or other with a description).
- (c) In the event that a fur seal, is observed on the rocks, beach, or in the water prior to commencement of activities, the MMO shall alert the stranding network and all activities shall be postponed until coordination with the stranding network is complete (including any potential 24-hour or 48-hour wait/observation period) and/or the animal either leaves, or is collected by the stranding network.
- (d) Acoustic recordings shall include the following:
 - (i) One location (at minimum) will be monitored close to the construction site (near field) and adjacent to the edge of the bluff overlooking Children's Pool. This will be a mobile station that will move based on the actual location of construction activities;
 - (ii) If the loudest construction activities are more than 15 m (49 ft) from the edge of the bluff, acoustic data also will be recorded at an additional near-field location closer to the construction / demolition activities;
 - (iii) Three fixed monitoring stations will be established parallel to the guideline rope (far-field);
 - (iv) If SPLs of 90 dB rms or greater are measured at any far-field monitoring station, additional monitoring will be conducted to determine the far-field extent of the 90 dB isopleth, and 100 dB isopleth, as applicable; and
 - (v) Acoustic monitor shall record time of observations, environmental conditions, and SPLs at applicable monitoring stations 30 minutes prior to the

start of demolition / construction, every hour during demolition / construction, and 30 minutes after cessation of demolition / construction activities.

- (e) At the start of each new phase of construction, a full day of acoustic monitoring shall occur. The number of days of monitoring required after the first full day of monitoring for each new construction phase shall depend on results of acoustic monitoring, as follows:
 - (i) If acoustic monitoring on the first day of a new phase of construction documents sound levels of 90 dB rms or greater at any far-field location, daily monitoring shall be required throughout that phase of construction;
 - (ii) If acoustic monitoring on the first day of a new phase of construction documents sound levels of 90 dB rms or greater at the near-field location, but not at any far-field location, then a minimum of two additional days of monitoring shall be required to confirm far-field sound levels remain less than 90 dB rms for construction phase durations of less than 4 weeks. Acoustic monitoring shall be conducted weekly to confirm far-field sound levels remain less than 90 dB rms for construction phase durations of greater than 4 weeks. If during the additional monitoring, sound levels of 90 dB or greater are recorded at any far-field location, then daily monitoring shall be required until the end of that construction phase; and
 - (iii) If Acoustic monitoring on the first day of a new phase of construction documents sound levels of less than 90 dB rms at the near-field location(s), then one additional day of monitoring shall be conducted to confirm near-field sound levels remain less than 90 dB rms. If a sound level of greater than 90 dB rms is

measured at the near-field location on the second day of monitoring, additional days of monitoring shall be conducted consistent with the specification listed under item 4(d)(ii).

5. Reporting

The holder of this Authorization is required to:

- (a) Submit a draft report on all monitoring conducted under the IHA within 90 calendar days of the completion of marine mammal and acoustic monitoring or sixty days prior to the issuance of any subsequent IHA for this project, whichever comes first;
- (b) Submit a final report within 30 days following resolution of comments on the draft report from NMFS. This report must contain the informational elements described in the Monitoring Plan at minimum, and shall also include:
 - (i) Results of the marine mammal monitoring plan including the elements described in 4(b); and
 - (ii) Results of acoustic monitoring as described in the Monitoring Plan.
- (c) Reporting injured or dead marine mammals:
 - (i) In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by this IHA, such as injury or mortality, the City will immediately cease the specified activities and report the incident to the Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinator, NMFS. The report must include the following information:
 - 1. Time and date of the incident;

2. Description of the incident;
3. Environmental conditions (*e.g.*, wind speed and direction, Beaufort sea state, cloud cover, and visibility);
4. Description of all marine mammal observations and active sound source use in the 24 hours preceding the incident;
5. Species identification or description of the animal(s) involved;
6. Fate of the animal(s); and
7. Photographs or video footage of the animal(s).

Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS will work with the City to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The City may not resume their activities until notified by NMFS.

- (ii) In the event that the City discovers an injured or dead marine mammal, and the MMO determines that the cause of the injury or death is unknown and the death is relatively recent (*e.g.*, in less than a moderate state of decomposition), the City will immediately report the incident to the Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinator, NMFS.

The report must include the same information identified in 5(c)(i) of this IHA. Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with the City to determine whether

additional mitigation measures or modifications to the activities are appropriate.

- (iii) In the event that the City discovers an injured or dead marine mammal, and the MMO determines that the injury or death is not associated with or related to the activities authorized in the IHA (*e.g.*, previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), the City will report the incident to the Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinator, NMFS, within 24 hours of the discovery. The City will provide photographs or video footage or other documentation of the stranded animal sighting to NMFS.

This Authorization may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein, or if NMFS determines the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals

Request for Public Comments

We request comment on our analyses, the draft authorization, and any other aspect of this

Notice of Proposed IHA for the proposed demolition and construction at Coast Boulevard, La Jolla, California. Please include with your comments any supporting data or literature citations to help inform our final decision on the request for MMPA authorization.

Dated: April 18, 2017.

Donna S. Wieting,
Director, Office of Protected Resources,
National Marine Fisheries Service.

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